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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,011	05/25/2001	Toru Shima	1113-014/MMM	9610

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EXAMINER

BHATNAGAR, ANAND P

ART UNIT PAPER NUMBER

2623

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3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/866,011

Applicant(s)

SHIMA, TORU

Examiner

Anand Bhatnagar

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) 5, 8, 9, 14, 5/16, 20, and 25 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/25/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Continuation of Disposition of Claims: Claims rejected are 1-4, 1/16, 2/16, 3/16, 6, 7, 10-13, 10/16, 11/16, 12/16, 13/16, 15-19, 21-24, and 26.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano et al. (U.S. patent 5,821,896).

Regarding claim 1: Nakano discloses an optical monitoring system (fig. 1 element 13 and col. 6 lines 48 and 49, wherein an optical monitoring is incorporated into the system to display the image results), comprising:

a moving body detection sub-system that images a monitored region onto an image plane and detects a moving body from changes over time in the monitored region (fig. 1 element 6, wherein a moving object is tracked);

a speed detection sub-system that detects a speed of the moving body in the image plane (fig. 1 element 6, wherein the speed of the object is determined);

a scale detection sub-system that detects a size for the moving body in the image plane (fig. 1 elements 12 and 14, col. 4 lines 40-45, and col. 6 lines 43-49, wherein the different scales of the object are stored in a database and used to identify the object); and

a moving body estimation sub-system that decides whether the moving body is a predetermined monitored subject based on the speed detected by the speed detection sub-system and the size detected by the scale detection sub-system (col. 6 lines 15-42, wherein the moving object is classified/identified based on its size, RCS, position, and/or speed).

Regarding claims 11 and 22: They are rejected for the same reasons as claims 1 and 17 above and for the following limitations of:

a position detection sub-system that detects a position of the moving body in the image plane (fig. 1 element 6 wherein the position of the moving object is determined);

a moving body estimation sub-system that decides whether the moving body is a predetermined monitored subject based on the position detected by the position detection sub-system and the size detected by the scale detection sub-system (col. 6 lines 15-42, wherein the moving object is classified/identified based on its size, RCS, position, and/or speed).

Regarding claim 2: The monitoring system wherein the moving body estimation sub-system has an actual scale estimation sub-system that determines an estimated actual size of the moving body based on the speed detected by the speed detection sub-system and the size detected by the scale detection sub-system, the moving body estimation sub-system deciding whether the moving body is the predetermined monitored subject based on the estimated actual size of the moving body (fig. 1 elements 6, 8, 12, 14, and 15 and col. 6

Art Unit: 2623

lines 15-41, wherein the object's actual size is determined and classified by the scale size determination, the speed, position and/or the RCS of the object.)

Regarding claim 3: The monitoring system wherein the moving body estimation sub-system includes:

a correlation relationship storage sub-system that stores correlation relationships between the speed and size of predetermined classes of moving bodies (fig. 1 elements 12-14 and col. 6 lines 15-42, wherein the results are displayed. The display contains a storage "display buffer" wherein the results of any data are usually first stored prior to being displayed); and

a class estimation sub-system that compares the speed detected by the speed detection sub-system and the size detected by the scale detection sub-system against the correlation relationships stored in the correlation relationship storage sub-system to estimate a class for the moving body, the class estimation sub-system deciding whether the moving body is the predetermined monitored subject based on the estimated class of the moving body (col. 6 lines 30-42, wherein the object is classified based on certain criteria).

Regarding claim 4: The monitoring system wherein the correlation relationship storage sub-system stores correlation relationships between speed and size statistically obtained from previous imaging test results for each class of moving body (col. 4 lines 40-45 wherein the data is previously stored).

Regarding claim 7: The monitoring system wherein the scale detection subsystem detects a size for the moving body in two dimensions in the image

plane (col. 1 lines 4 and 5, wherein the data of an object in an image is determined. An image is read as a two dimensional image).

Regarding claim 12: It is rejected for the combination of rejection of claims 2 and 11.

Regarding claim 13: It is rejected for the combination of reasons of claims 3 and 11.

Regarding claims 1/16, 2/26, 3/16, 11/16, 12/16, 13/16, 21 and 26: The monitoring method wherein the moving body estimation sub-system decides whether a moving body is the predetermined monitored subject for a limited specified area of the monitored region (col. 1 lines 1 lines 4 and 5, wherein a radar image is analyzed for the identification of an object. A radar limit has a monitoring range, i.e. length, height, and width. Therefore the object is being monitored in a limited space).

Regarding claims 18 and 23: It is rejected for the same reason as claim 2 above.

Regarding claims 19 and 24: It is rejected for the same reason as claim 3 above.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2623

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 10, 10/16 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (U.S. patent 5,821,896).

Regarding claim 6: The monitoring system wherein the scale detection subsystem detects a size for the moving body in only one dimension in the image plane. Examiner takes official notice because it is well known in the art to analyze one, two, and/or three dimensions.

Regarding claims 10 and 15: The monitoring system wherein the moving body detection sub-system includes a solid-state imaging element in which image signals are generated in plural pixels for each of first and second successive image frames, wherein a difference is obtained between the image signals generated in each pixel for successive first and second image frames. Examiner takes official notice because solid-state imaging and obtaining pixel differences between images are well known in the art.

Regarding claim 10/16: The monitoring method wherein the moving body estimation sub-system decides whether a moving body is the predetermined monitored subject for a limited specified area of the monitored region (col. 1 lines 1 lines 4 and 5, wherein a radar image is analyzed for the identification of an object. A radar limit has a monitoring range, i.e. length, height, and width. Therefore the object is being monitored in a limited space).

Allowable Subject Matter

3. Claims 5, 8, 9, 14, 5/16, 20, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dubats (U.S. patent 5,559,496) for detecting an object based on its size, speed, and directional characteristics.

Ito et al. (U.S. patent 6,445,409) for classifying an moving object.

Contact Information

5. Any inquiry into this communication should be directed to Anand Bhatnagar whose telephone number is 703-306-5914, whose supervisor is Amelia Au whose number is 703-308-6604, group receptionist is 703-305-4700, and group fax is 703-872-9306.

AB

Anand Bhatnagar

Art Unit 2623

June 12, 2004


SAMIR AHMED
PRIMARY EXAMINER